

We claim:

1. In a radio communication system having a network part that maintains at least a network-copy first database containing data and a mobile node that maintains at least a mobile-copy first database containing data, the data  
5 of the network-copy and the mobile-copy of the first database, respectively, correspond when the network-copy and the mobile-copy of the first database are in match with one another, an improvement of apparatus for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database to place the network-copy and the mobile-copy in match with  
10 each other, said apparatus comprising:

a hash generator embodied at the mobile node and adapted to receive representations of at least the mobile-copy of the at least the first database, said hash generator selectably for forming hash values responsive to the representations provided thereto, the hash values for communication to the  
15 network part to determine whether the network-copy and the mobile-copy are in match with one another; and

a content retriever embodied at the mobile node, said content retriever for retrieving data from the mobile-copy of the at least the first database upon detection of determination that the network-copy and the mobile-copy are out of  
20 match, the data retrieved by said content retriever for communication to the network part, to be used to match the network-copy and the mobile-copy theretogether.

2. The apparatus of claim 1 wherein said hash generator generates the  
25 hash values responsive to an external triggering event, occurrence of which is detectable at the mobile node.

3. The apparatus of claim 1 wherein said hash generator generates the hash values responsive to an external triggering event, occurrence of which is  
30 detectable at the mobile node.

4. The apparatus of claim 3 wherein said hash generator generates the first-type hashes upon detection of an external triggering event, indications of

occurrence of which is detectable at the mobile node and wherein said hash generator generates the second-type hashes responsive to determination of mismatch of the first-type hashes, generated by said hash generator, with network-calculated values.

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5. The apparatus of claim 4 wherein the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records, each data record formed of fields including at least a first key field and at least a first record field, and wherein the second-type hashes  
10 selectably generated by said hash generator are formed of values of the at least the first key field.

6. The apparatus of claim 5 wherein the determination that the network-copy and the mobile-copy are out of match is made responsive to values  
15 of the second-type hashes formed of the values of the at least the key field.

7. The apparatus of claim 5 wherein the data retrieved by said content retriever comprises both the at least the first key field and the at least the first record field.

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8. In the radio communication system of claim 1, a further improvement of apparatus for the network part also for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database, said apparatus comprising:  
25 a determiner adapted to receive values of the hash generated by said hash generator, said determiner for determining whether the values of the hash correspond with locally-generated values; and  
a requestor coupled to said determiner to receive indications of determinations made thereat, said requestor selectably for requesting additional  
30 information associated with the mobile-copy of the at least the first database.

9. The apparatus of claim 8 wherein the hash generated by said hash generator is selectably of a first hash-type and at least a second hash-type, and

wherein the locally-generated values with which said determiner compares the hash are correspondingly selectably of a first hash-type and a second hash-type.

10. The apparatus of claim 8 wherein the additional information  
5 requested by said requestor comprises a request for the mobile node to deliver hash information of the second hash-type to the comparator.

11. The apparatus of claim 8 wherein the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised  
10 of data records and wherein the additional information requested by said requestor comprises a request for the mobile node to deliver values of at least portions of the data records.

12. The apparatus of claim 11 further comprising a comparator adapted  
15 to receive the values of the at least the portions of the data records responsive to the request therefor to the mobile node, said comparator for comparing the values with corresponding values of the network-copy of the at least the first database.

13. The apparatus of claim 12 further comprising a database value  
20 updater coupled to said comparator, said database value updater selectably operable responsive to comparisons made by said comparator to alter at least one data record of a selected one of the mobile-copy and the network-copy of the at least the first database.

25 14. The apparatus of claim 13 wherein said database value updater operates pursuant to a selected conflict resolution protocol.

15. In a method of communicating in a radio communication system having a network part that maintains at least a network-copy first database  
30 containing data and a mobile node that maintains at least a mobile-copy first database containing data, the data of the network-copy and the mobile-copy of the first database, respectively, correspond when the network-copy and the mobile-copy of the first database are in match with one another, an improvement of a

method for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database to place the network-copy and the mobile-copy in match with each other, said method comprising:

selectably sending first hash information from the mobile node to the  
5 network part, the first hash information representative of the mobile-copy of the first database;

comparing, at the network part, the first hash information sent during said operation of selectably sending with corresponding network-copy first hash information;

10 comparing, at the network part, the first hash information sent during said operation of selectably sending with corresponding network-copy first hash information; and

selectably requesting additional information regarding the mobile-copy first database responsive to comparisons made during said operation of comparing  
15 the first hash information.

16. The method of claim 15 wherein the additional information requested during said operation of selectably requesting comprises second hash information from the mobile node to the network part, the second hash information also representative of the mobile copy of the at least the first  
20 database.

17. The method of claim 16 further comprising the operations of: sending the second hash information from the mobile node to the network part; comparing, at the network part, the second hash information sent during said  
25 operation of sending the second hash information with corresponding network-copy second hash information; and selectably requesting at least portions of the mobile-copy of the at least the first database responsive to comparisons made during said operation of comparing the second hash information.

30 18. The method of claim 17 further comprising the operations of delivering the at least the portions of the mobile-copy to the network part, comparing the portions of the mobile copy delivered during said operation of delivering with corresponding portions of the network-copy of the at least the

first database, and selectably causing overwriting of the portions of a selected one of the network-copy and the mobile-copy responsive to comparisons made during said operation of comparing the portions of the mobile-copy.

5           19.    The method of claim 18 wherein the selected one of the network-copy and the mobile-copy of which the portions thereof are selectably caused to be overwritten is selected according to a conflict resolution scheme.

10           20.    The method of claim 19 further comprising the operation of creating a change-history by indicating overwriting of the portions selectably caused during said operation of selectably causing.